The Citrus Industry

THE CITRUS OUTLOOK

Reports from field men in all sections of the Florida Citrus belt indicate that most groves are now in fine condition, that the fruit is coming along nicely and the growers are for the most part in excellent spirits, anticipating a profitable season just ahead.

Since the rains have started, following an exceedingly dry Spring, the trees have put on an exceptionally vigorous new growth and the late bloom is now appearing. Some fruit from the early bloom is now sizing up well, with indications that much of this early bloom fruit will mature and pass the maturity tests much earlier than last season. How the late bloom may develop is problematical.

Insect pests have been unusually active, scale, rust mites, and spiders have been particularly aggravating. However, most growers have been actively spraying for these pests and appear now to be getting the pests under control.

Up to this time there has been little activity on the part of on-tree buyers. However, they are beginning to show some signs of activity, but so far few sales have been reported.

All in all, the growers are entering the new season with a feeling of optimism in contrast to that of some recent years.

Vol. 31, No. 8 August, 1950

Perfection Is Rarely Attained

But in the production of citrus fruit there is always a demand for fruit which approaches perfection . . . and that is the reason that so many Florida growers make a practice of providing their trees with the proper nourishment and exercise every proven cultural practice to make their crops as nearly perfect as possible.

Growers who produce crops which are pleasing to the eye and pleasing to the taste are the ones who profit most when it is time to sell their crops.

And many of these growers will gladly tell you that they credit the use of Florida Favorite Fertilizers with the major portion of the responsibility for producing large crops of fine citrus fruit year after year.

Our citrus fertilizers are not designed solely by a book formula, but also represent the serious and intensive study of our Field Service Men over a period of many years to develop fertilizers which will fill the particular requirements of each individual grower. Your requirements, too, can be most efficiently met by a Florida Favorite Fertilizer product especially designed to fit your needs.

And you will find our own truck fleet delivery a decided asset to you when it's time to apply your fertilizer.

Florida  **Favorite**

FERTILIZER, INC.

Old Tampa Road **Lakeland, Florida**

Citrus Insects For ... August 1950

J. T. GRIFFITHS AND
W. L. THOMPSON
CITRUS EXPERIMENT STATION,
LAKE ALFRED, FLA.

During August growers will be primarily concerned with completing their sprays for scale control and applying sulfur where rust mite infestations are building up. If scalicides are still to be applied on varieties which will be picked for early markets, it is recommended that parathion be substituted for oil. This is due to the fact that, during August, oil has a very adverse effect on both solids and color. However, where Valencias or late grapefruit are concerned, oil may be used since these factors are not too critical.

Purple scales will be laying eggs about September 1. Therefore, although most of the month will be satisfactory for killing purple scales, better control will be obtained during the first two weeks. Sprays primarily for the control of red scales should be avoided during a ten day period around the middle of the month since an egg deposition period is expected at that time.

A number of growers have reported unsatisfactory control with parathion sprays. In most cases this has been attributable to an inadequate spray job. Coverage was not satisfactory due to several reasons. In some cases a boom type sprayer did not give good coverage. In other instances the sprayer was driven too fast or the spray hands failed to get in under the trees. Thus, either too little spray was applied or coverage was incomplete, or both. While parathion may be expected to kill scales as well as oil when properly applied, it should not be expected that brushing type sprays will be satisfactory. Therefore, it is emphasized here that coverage with parathion must be as thorough and as complete as where oil sprays are applied.

The number of illness caused by parathion has continued to rise throughout June and July. However, none have been very serious and all of the individuals have been treated in the early stages of poisoning. Certain facts have made themselves evident and this information is passed along so that workers handling parathion may be better protected. In the first place it has been found that masks do not always fit tightly and that the charcoal cartridges on the side of the mask have not been replaced at regular intervals. It is suggested that growers using parathion check with their individual workmen and make sure that the masks are fitting properly and that the cartridges are being replaced. It is especially around the nosepiece that most leaks have been detected, and these have caused some spray hands to complain of smelling parathion throughout the spray operation. This would be expected only where improper fitting or improper replacement of cartridges has been in effect. Improper fitting may be caused by unusual facial contour or by failure to tighten head straps sufficiently.

It has also been noted that many men are not changing their clothing each day. Recent developments show that changing clothing daily is of the utmost importance to men engaged in handling parathion. Parathion will accumulate in the clothing and some tests have shown considerable amounts remaining there. It is suggested that the spray hands be watched carefully to insure that clean clothes are worn every day and that a thorough bath is taken each evening. These precautions should help to maintain low incidence of illness from parathion. As was suggested last month try to limit exposure to no more than six day periods.

Rust Mites

Sprays or dusts for rust mite control will be needed in many groves during August. There is a popular belief in the state that summer rains will reduce rust mite infestations. This summer demonstrates once again the fallacy of this idea since rust mites have generally increased during June and July. Therefore, check groves carefully and be prepared to apply sulfur when rust mites make their appearance.

Under no circumstances should lime-sulfur be used on early varieties. Sulfur burn may occur from any form of sulfur, but the use of lime-sulfur will increase the hazards from this standpoint. In general, wettable sulfur will result in less burn than dusting sulfur. This is due to the fact that more uniform coverage is obtained. However, dusting sulfur may be used where the grower desires to save on application costs.

Grasshoppers

While bird grasshoppers have not been a major problem in any area during the past spring, there is always a possibility that the second generation may cause some trouble this fall. These hoppers generally begin to hatch in late August. It is suggested that growers who anticipate such an infestation should check their groves during the latter part of August. If such a hatch is beginning, clean cultivate the grove. Evidence at the present time does not indicate that cultivation at that time will have any adverse effect upon either solids or color in the fruit.

For additional and more complete information apply to the Florida Citrus Experiment Stations at either Lake Alfred or Fort Pierce.

Approximately 4,500 picnicking and camping areas in national forests are being used this summer.

The Citrus Industry
EXCLUSIVE SPECIALIZED CITRUS PUBLICATION
Issued Monthly
Representative of every interest
Representing no special interest

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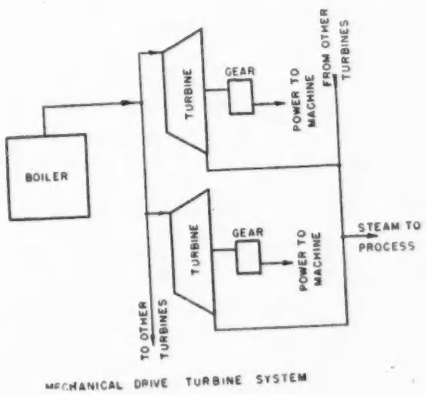
Saving Money In The Citrus Processing Plant . . .

GEORGE E. KEMP, P. E.
MECHANICAL ENGINEER
GAINESVILLE, FLA.

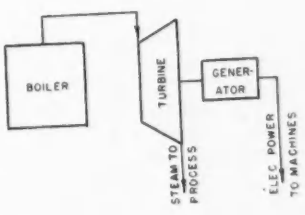
More than ever before, due to rising costs, it is necessary for the management of citrus processing plants to seek ways to reduce operating costs. Some of the most fruitful fields for cost cutting lie in the power, fuel and water areas of plant operations. This short article is intended to point out in a general way some of the methods of cost cutting in these areas which are applicable to the small and medium-sized plant in particular. It will be noted that all three areas, power, fuel and water, are related to each other, so that a modification which produces a saving in one will often produce a saving in the others.

Power—

It is not generally realized that in plants which require considerable quantities of process steam power can be produced as a by-product at a very slight additional cost over the cost of production of the process steam. This power production can be accomplished by the use of mechanical drive geared turbines at the various power using machines, or by the use of turbo-generators producing electrical energy for distribution to individual electric motor drives. These turbines can take the place of the reducing valves which are ordinarily used at the processing machines to provide usable steam pressures for the process heaters. Figure 1 shows the method of application of steam turbines to the two types of systems.



MECHANICAL DRIVE TURBINE SYSTEM



TURBO-ELECTRIC SYSTEM

Some of the advantages of these systems are:

1. Power can be produced at an operating cost which is the equivalent of electrical power purchased at approximately two-tenths of a cent per kilowatt-hour.

2. In the case of the mechanical drive system the investment in steam turbines is approximately the same as the investment in electric motors.

3. In the case of the turbo-electric system great flexibility is obtained, and in many cases the additional investment can be retired from savings in as little as two years.

Some of the disadvantages of these systems are:

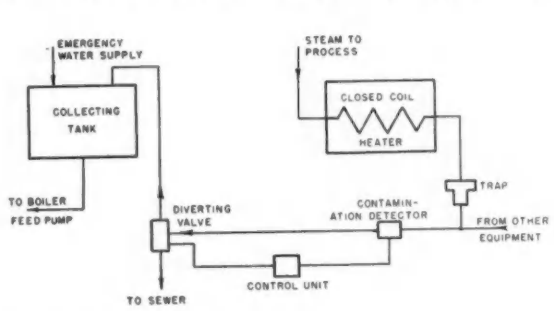
1. The minimum size for a mechanical drive turbine is approximately five horsepower.

2. In either system the process steam requirements must always be equal to or greater than the amount necessary to produce the required

power if all of the power is to be produced as a by-product. If sufficient steam is not available to produce all of the required power, it is usually possible to select certain key machines to be supplied with by-product power and to allow the remainder of the machines to operate with purchased power.

Fuel—

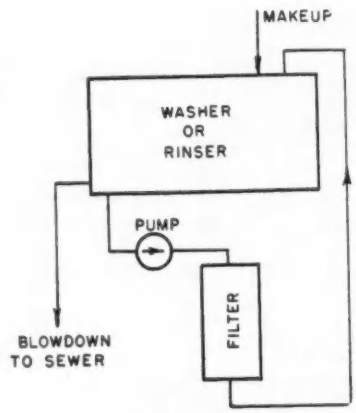
One of the easiest ways to reduce fuel consumption in the citrus processing plant is to return the condensate from processing equipment to the boilers through a recovery system. This is almost never done in the small to medium-sized plant, however, because of the widespread use of open jet steam heaters and because of the fear of boiler damage from contaminated condensate from closed coil heating systems. Very considerable savings (up to 16 per cent of the fuel cost) can be made by converting the open jet heaters to the closed coil type and returning all condensate to the boilers. It is not likely that contamination could reach the boilers from processing machinery utilizing closed coils, but in those cases where the fear persists a very simple alarm and condensate diverting system can be provided, as shown in Figure 2.



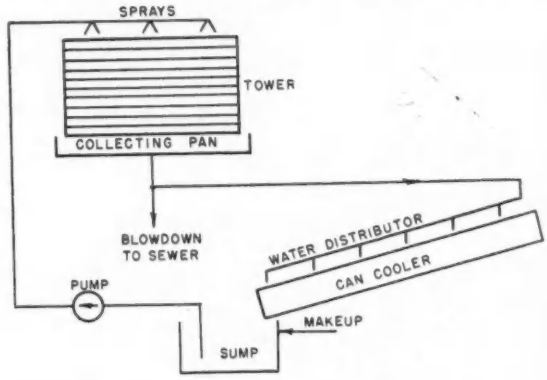
Water—

Citrus processing plants require great quantities of water for various purposes, such as fruit washing and rinsing and can cooling. At the present time, almost all of this water is used only once, but from the standpoints of economy and water conservation it would be desirable to reuse the water wherever possible.

Water can be reused in fruit washing and rinsing machines with the addition of very simple filtering equipment to remove the suspended dirt from the water and by the use of a continuous blowdown and makeup system to prevent the accumulation of dissolved impurities in the water. Such an arrangement is shown in Figure 3.



Water can be reused in can coolers by the addition of a simple atmospheric spray cooling tower to dissipate the heat from the cans to the atmosphere. Figure 4 shows how this can be accomplished.



Water recirculating systems provide excellent means for water conservation, and in addition will usually pay for themselves out of savings in water cost in about a year.

It is hoped that this article will give some food for thought in the matter of cost cutting in the citrus processing industry. A competent engineer can almost always find ways to modify a plant's heat balance or operating practices to effect economies which will very effectively reduce operating costs.

Shift Of Orange Haul From Rail To Truck

Trucks and boats hauled a larger share of Florida orange shipments to 9 leading markets last year than in 1948, and railroads a smaller share. This is disclosed in a publication of the U. S. Department of Agriculture, "The Marketing and Transportation Situation," reporting on a study made by the Bureau of Agricultural Economics.

The shift from rail transportation to trucks and boats in 1949, the report sets out, resulted in railroads hauling about 2,800 fewer carloads of oranges than in 1948 to the nine markets included in the study.

The report estimates that railroad revenues in 1949 were $1,250,000 below what they would have been if this shift had not occurred.

The markets included in the study were New York, Boston, Chicago, Washington, D. C., St. Louis, Atlanta, New Orleans, Los Angeles, and San Francisco.

In total, about 4,800 fewer carloads of Florida oranges went by rail to these markets last year than in 1948, the report states. However, a smaller total volume of Florida oranges were sold in the 9 markets than the year before, which accounted for a drop of about 2,000 carloads out of the 4,800.

Dealing with a problem where direct measurement is not possible, this study resulted in development of a technique for estimating shifts of traffic between different kinds of transportation. Railroads, motor carriers, and State highway officials have repeatedly asked for estimates of this type as a guide for their policies and operations. In addition, shippers, processors, dealers, and producers each have a stake in these shifts and their measurement. The study was conducted under provisions of the Research and Marketing Act of 1946.

17th Annual Citrus Growers Institute At Camp McQuarrie

Camp McQuarrie

Astor Park, Lake County, Florida

Monday to Friday, August 28 to Sept. 1, 1950—Directed by the Florida Agricultural Extension Service.

Monday, August 28

2:00-600 p. m.—Camp Registration and Fishing.

6:15 p. m.—Supper—Mess Hall.

8:00 p. m.—Assembly — Auditorium—R. E. Norris in charge.

Tuesday, August 29

K. S. McMullen, in charge, M. O. Watkins, Chairman.

7:45 a. m.—Breakfast — Mess Hall.

8:30 a. m.—Auditorium for Announcements and Program.

8:45 a. m.—Welcome—Karl Lehmann, Secretary, Lake County Chamber of Commerce.

Opening Remarks—H. G. Clayton, Florida Agricultural Extension Service.

"The Effect of Oil and of Parathion Sprays on the Quality of Early Oranges"—Dr. Paul L. Harding, Principal Plant Physiologist, USDA, Orlando.

"Parathion in the Control of Citrus Insects"—W. L. Thompson, Entomologist, Citrus Experiment Station.

"Growers' Liability in the Use of Parathion"—Wendell C. Heaton, Acting Director, Florida Industrial Commission.

"Preliminary Results with Grove Irrigation Experiments"—J. W. Sites, Horticulturist, Citrus Experiment Station.

12:00 Noon—Dinner, Mess Hall.

1:30 p. m.—"The Reliability of Soil Analysis as a Guide to Fertilizer Practices"—Dr. O. C. Bryan, Soil Science Foundation, Lakeland.

"Factors to be Considered in Choosing Citrus Rootstocks"—Dr. F. E. Gardner, Principal Horticulturist, USDA, Orlando.

"The Transportation and Container Problem"—Gordon Stedman, Manager, Growers and Shippers League, Orlando.

"Some Aspects of the Manatee Snail in Citrus Production"—Fred P. Lawrence, Citriculturist and R. E. Norris, Lake County Agent.

4:00 p. m.—Adjourn—Boating, Swimming, Fishing, etc.

6:15 p. m.—Supper—Mess Hall.

8:00 p. m.—Auditorium—Recreation Program—G. T. Huggins, Asst. Duval County Agent in Charge; Also a special program by the Tom Thumb Follies of Orlando.

Wednesday, August 30

K. S. McMullen, in Charge, Fred P. Lawrence, Chairman.

8:30 a. m.—Announcements — Auditorium.

8:45 a. m.—"Leaf Analysis and what it Discloses about Citrus Nutrition"—Dr. Walter Reuther, Principal Horticulturist, USDA, Orlando.

"Predators and Parasites in the Control of Citrus Insects"—Dr. J. T. Griffiths, Assoc. Entomologist Citrus Experiment Station.

"Some Remarks Pertaining to our Citrus Disease Investigations"—Fran Fisher, Asst. Plant Pathologist, Citrus Experiment Station.

"Some New Field Work in Citrus Research"—Dr. R. M. Pratt, Associate Entomologist-Pathologist, Citrus Experiment Station.

"The University of Florida's College of Agriculture, Extension Service and Experiment Station System and the Florida Citrus Industry"—Dr. J. Wayne Reitz, Provost for Agriculture, University of Florida.

12:00 Noon—Dinner—Mess Hall.

1:30 p. m.—D. E. Timmons, Chairman.

"The Growers Future in the Florida Citrus Industry," A symposium — Walton Rex, Orlando, Moderator.

"The Present Situation, Outlook and Competition in the Citrus Industry"—F. W .Parvin, Associate Extension Economist.

"Present Trends in Citrus Marketing"—Marvin H. Walker, General Manager, Florida Citrus Canners Coop., Lake Wales.

"The Role of the Independent Concentrators in the Citrus Industry"—R. A. Fender, Minute Maid Corp.

"Cost of Processing Citrus Fruits"—Dr. Ralph Miller, Plymouth Citrus Products Cooperative, Plymouth.

"Trends in the Citrus Industry as They Affect the Small Grower"—Murl Pace, General Manager, United Growers and Shippers Ass'n., Orlando.

Summary: Dr. J. Wayne Reitz.

4:00 p. m. — Adjourn — Swimming, Boating, Fishing, Etc.

6:15 p. m.—Supper—Mess Hall.

8:00 p. m.—Auditorium—Recreation—G. T. Huggins, in Charge.

Thursday, August 31

K. S. McMullen, in Charge, F. S. Perry, Chairman.

7:30 a. m. — Breakfast — Mess Hall.

8:30 a. m.—Auditorium — Announcements.

8:45 a. m.—"Distinguishing Between Gummosis, Psorosis and Foot Rot Infections of Citrus Trees"—Dr. J. F. L. Childs, Plant Pathologist, USDA, Orlando.

"Transplanting Bearing Citrus Trees—Illustrated Talks"—R. E. Witherell, District Conservationist, US Soil Conservation Service, Orlando and R. E. Norris, Lake County Agent.

"The Program of the Florida Citrus Commission"—W. F. Robinson, Leesburg, Chairman.

"The Program of Florida Citrus Mutual"—Lacy G. Thomas, Groveland, President.

"The Role of Florida Bankers in the Citrus Industry" by T. G. Mixson, St. Petersburg, Chairman, Citrus Committee, Florida Bankers Association.

12:00 Noon—Dinner—Mess Hall.

1:30 p. m.—"Pruning, Hedging and Spacing Citrus Trees"—Morty Howell, Production Manager, Waverly Growers Cooperative.

"A New Type Citrus Duster (Demonstration and Review of Results to Date)"—D. S. Prosser, Asst. Horticulturist and W. L. Thompson, Entomologist, Citrus Experiment Station.

"The Use of 2,4-D in Citrus Fruit Drop Control"—Dr. P. C. Reece, Associate Botanist, USDA, Orlando.

"Remarks on Some Citrus Problems"—Dr. A. F. Camp, Vice-Director in Charge, Citrus Experiment Station.

4:00 p. m.—Adjourn — Boating, Swimming, Fishing, etc.

(Continued on Page 9)

The 1949-50 Citrus Season In Retrospect . . .

Now that the 1949-50 citrus season has become a matter of history it is well that consideration should be given to the final results of the marketing program and to the elements which brought about those results.

In reviewing the season for the Florida State Marketing Bureau, Mr. H. F. Willson in charge of the Federal-State Market News Service says among other things.

General Comments

Following a slow and dismal beginning of the 1949-50 season, with pre-holiday citrus prices generally at relatively low levels, the Florida orange grower was soon thereafter in the enviable position of having three branches of the Industry (fresh, canned and frozen) actively bidding for raw fruit. The 'on tree,' f.o.b. and processed prices of oranges sky-rocketed above the most optimistic preseason predictions and the seasonal auction average was the highest in 22 years, or since 1927-28. With the U. S. grapefruit crop estimated at only 36 million boxes, Florida's seasonal grapefruit average set an even better record in being the highest during volume production history or 31 seasons. Florida grapefruit, with only minor competition from Texas, maintained a high price level and a minimum of fluctuation throughout the entire shipping period. Tangerines had the least impressive record, when compared with recent years, but again it was a smashing performance, particularly in production. Pertinent factors contributing to these peak prices were: the phenomenal increase in the frozen concentrate production and the resultant scramble for fruit; comparatively light crops in the citrus States of Texas, California and Arizona due to recent freezes; higher maturity and grade standards; the most complete organization of Florida growers in the history of the citrus industry and this organization's establishment of minimum or floor prices at strategic periods.

The Florida hurricane in late August blew off much of the early bloom citrus, especially grapefruit, and this situation combined with higher quality standards resulted in consistently light supplies during the first part of the season. Following a relatively cool late November, Florida then experienced one of the warmest December's and January's on record. According to the U. S. Weather Bureau, Florida had the longest frost-free period for the State, as a whole, ever recorded. When the desired state of maturity and quality was reached in December and January, the weekly utilization of Florida citrus was astounding. On tree sales of oranges, both for immediate and delayed picking dates, were very heavy. The fresh orange movement peak week was the one ending Dec. 17, which together with the cannery utilization, totaled in excess of 3 million boxes. Processors, alone, approached 2 million boxes of oranges in the peak week ending Jan. 14th and fresh channels accounted for 2/3 million for a total of over 2.5 million boxes. Top week for cannery grapefruit was the one ending Jan. 28th, with approximately 777,000 boxes used. Cannery utilization of oranges and tangerines broke all previous records. When both the 'hot-pack' and frozen concentrate activities were in full swing, they were the most important contributing factors in the fresh fruit situation—both as to volume and price 'on the tree' and f.o.b. Valencias started off slowly and instead of a glut of available oranges towards the end of the mid-season fruit, there was actually a period of scarcity of high solids fruit preferred by Concentrators. This development was directly opposite to recent former years when the last of the mid-season oranges and the first of the Valencias overlapped and resulted in too liberal supplies for best merchandising. As the prices of oranges reached dizzy heights, at all levels, there was increasing consumer resistance. Mexican imports to Canada, oranges in particular, cut Florida's Canadian business on fresh fruit heavily. The combined total unloads of oranges and grapefruit for all States in the 100 cities during February and March, 1950, (compared with the same months in 1949) show a marked reduction, while a similar tendency for canned citrus juices was reported in the "Monthly Consumer Purchases" for the corresponding period. Then occurred one of the most vital developments of the entire season, or a downward adjustment of prices in all channels, or from grower to retailer. The Trade did not want a repetition of 1945-46 performance, when there was a heavy carry-over of processed citrus at high inventory prices that finally was cleaned up at disastrously low levels. As cannery prices reached the peak of $3.50 delivered for oranges, the single strength or 'hot-pack' canner was practically forced out of the market. Volume utilization dropped sharply, demonstrating that for timely and efficient marketing of Florida citrus, there should be a favorable balance between all outlets for most effective merchandising. In the retail channels, each class of fruit—fresh, canned or frozen—has its following of consumers. The elimination of single strength, concentrate or fresh fruit operations—either wholly or in part—results in marketing under a handicap. The uncertainty of how long oranges would maintain a sufficiently high standard for top quality procesed fruit caused some concern toward the end of the season. As the pendulum swung to lower returns, there didn't seem to be any turning point until an established minimum level was again placed in effect on f.o.b. sales and delivered cannery prices. However the practice of 'blending' in the final weeks so as to furnish the consumer the highest quality, most acceptable product, helped in extending volume processing and maintaining the price level. Another highly important development that aided materially in stabilizing the market towards the close of the season was the realization that crops were not picking out as anticipated and the resultant decrease in both the April 1st and May 1st

Government Estimate for oranges and the May 1st Government Estimate for grapefruit. In the final analysis, the pronounced trends in the utilization of Florida oranges during the 1949-50 season were the marked declines in fresh fruit shipments and the canning of single strength, with a sensational increase in the production of frozen concentrates.

Auction Averages

The 1949-50 seasonal auction averages for Florida oranges, grapefruit and tangerines broke all existing records of the past two decades with two years extra thrown in for good measure. Grapefruit led with the highest average for volume production in the history of the Industry. For both oranges and tangerines, the seasonal auction averages in 1927-28 were substantially higher than in 1949-50. Detailed comparison of 1949-50 through the week ending June 2nd as contrasted to the seasonal averages for 1948-49 follow: ORANGES—Interior—1949-50 season—standard and standard wire-bound boxes combined $4.55, Indian River $5.25—Last year's averages were $4.15 and $4.46, respectively. Temples were segregated from other oranges for the State as a whole, irrespective of section, for the first time in 1949-50 and averaged $3.13 per half-box for the season. GRAPEFRUIT—1949-50—Interior — standard wirebound boxes combined — Seed: white $3.86, pink $4.82, Seedless: white $4.44, pink $5.95; Indian River—Seed: white $4.49, pink $5.58, Seedless: white $6.04, pink $6.90. All Florida grapefruit through June 3, 1950—Interior, Indian River, seed and seedless, white and pink averaged $5.10 compared to the final average last season of $3.77. Tangerines averaged $2.63 per 4/5 bushel box compared to $2.55 a year ago. In 1949-50, Indian River fruit accounted for 29.5 percent of the oranges and 40.7 percent of the grapefruit offered at auction.

Cannery Utilization

Cannery operations started off slowly, with opening dates considerably later in the season than a year ago. Through Oct. 29th, only 57,682 boxes of oranges had been used in contrast to more than one-half million boxes (636,177) to the coresponding date last season. It was not until after the middle of November, that the orange volume exceeded 500,000 boxes weekly, but the rate of increase was very rapid and the weeks ending Dec. 3rd and 10th, accounted for an average of nearly a million and a quarter boxes each week. For the next two weeks or the ones ending Dec. 17 and 24th, the rate was stepped up to over 1.6 million weekly. A year ago, the peak week of the season was the one ending Feb. 19th with a mere 1,311,029, while the peak week for 1949-50 almost reached the 2 million mark or 1,872,085 boxes for the one ending Jan. 14th. At the time of the peak week all processors were very active. The light volume weeks, during the active season, occurred during the periods ending March 18th and 25th. This was following the end of the mid-season fruit and before the utilization of Valencias in a large way. From the low point of around one-half million boxes the latter part of March, volume increased steadily—reaching more than 1 million weekly during the last of April and held this pace thru May. The total volume of oranges used by the canners exceeded the previous top season by a considerable margin or approximately 31.3 million boxes through May 27, 1950 compared to a final of 30.4 in 1947-48. For grapefruit, however, it was a different story. The total volume of 12 million plus through May 27th was only a little more than one-half of the 1945-46 record season when 22,124,436 boxes were used by the processors. During the month of December, a trifle over 300,000 boxes were used weekly, with a total to date through Dec. 31st barely exceeding 2 million boxes as compared with more than 5 million to the same time a year ago. During the first week in January, the utilization exceeded 500,000 boxes. For the next 10 weeks, the weekly amount ranged from a little more than one-half million to the peak week of the season ending Jan. 28th, when 776,747 boxes were used. Tangerines, like oranges, broke all previous records but by a more substantial percentage. The 1949-50 pack increased more than 50 per cent of the 1948-49 volume—the former peak year when just short of 1 million boxes were utilized or 999,354. The 1949-50 season's total amounted to 1,590,353 boxes.

Distribution

Again, as in 1948-49, the distribution of Florida citrus was wide spread, particularly during the latter part of the season. Through June 1st, based on the Florida gateway passings, the West (territory north of the Ohio River and west of the Mississippi River) received 7,423 rail cars compared to 15,268 to the eleven Northeastern States. By adding the boat movement, which was the equivalent of 4,837 cars on 500 box basis, to the East—the Western territory received slightly more than 1/3 of the volume destined to Eastern points. During 1949-50, a weekly segregation of the truck movement of Florida oranges, grapefruit and tangerines, was tabulated. From these compilations, it was surprising how equally divided this distribution was. Through May 31, 1950, distribution by truck was as follows:

Carlots — Basis 500 boxes

	East	West	South
Oranges	6,338	5,778	7,089
Grapefruit	2,282	2,126	1,844
Tangerines	1,088	824	794

17TH ANNUAL CITRUS GROWERS INSTITUTE

6:15 p. m.—Supper—Mess Hall.

8:00 p. m.—Auditorium—G. T. Huggins, in Charge.

Friday, September 1

7:30 a. m.—Breakfast.

Adjourn Camp.

A full program of education, inspiration and recreation is provided at the Institute. Men, women and children are invited and ten cottages accomodating 110 persons are available without charge to the first 110 persons sending in their reservations accompanied by $1.00 reservation fee.

Reservations should be made with R. E. Norris, County Agent, Tavares, Florida. Cost for meals will be $9.00 for the camping period or $1.00 per meal.

U. S. FARMERS NOW OWN 2,500,000 TRUCKS

America's farmers own 2,500,000 trucks, and another 500,000 trucks haul only farm products, according to E. D. Bransome, president of Mack Trucks, Inc.

Eighty-nine percent of all farm products, he said, now reach their markets by highway.

Mr. Bransome issued these figures in connection with the nationwide Golden Anniversary which Mack Trucks launched at its Allentown, Pa., plant to mark its fiftieth year in business.

An Interpretation Of The Cause Of Resistance To Wetting In Florida Soils . . .

I. W. WANDER
CITRUS EXPERIMENT STATION,
LAKE ALFRED

AT MEETING FLORIDA STATE
HORTICULTURAL SOCIETY

The inability to readily wet soils which have been planted to citrus, especially through the ridge district, has been recognized for many years. This phenomenon is also to be found in gardens, lawns and non-cultivated areas and is not confined to groves. This resistance to wetting varies in degree and is usually greatest in an uncultivated area such as found under a tree, although often middles which have been thoroughly cultivated exhibit considerable water repellency. Several reports (2) (3) (5) have discussed this property but little information is available regarding a cause or reason for these sandy soils to be water repellent. Since maximum utilization of irrigation or rainfall is dependent on uniform distribution of water through the soil it is important to understand and correctly evaluate this phenomenon.

During the rainy seasons of the past three years, 1947, 1948, 1949, differences in the amounts of water repellent soil were noted in a group of plots of grapefruit which had received different fertilizer treatments for the last 10 years. The relative amounts of water repellent soil were estimated by placing a drop of distilled water on soil samples taken from beneath trees and observing the time required for absorption. This was done by taking samples to a six inch depth with a stainless steel tube 1 inch in diameter, turning the sample tube upside down and placing the drop of water on the exposed soil surface. If the drop of water did not soak into the soil within 10 seconds, the soil was listed as water repellent, and, vice versa, easy to wet. Eighty examinations were made in each plot and the results from duplicate plots combined. The results of this investigation are shown in Table 1. These results indicate that fertilizer practices influence the amount of water-repellent soil found under field conditions.

It is known that fatty acids form very insoluble soaps with calcium, magnesium and other bi- and trivalent metals and that these soaps, when dry, are extremely water-repellent. Waksman (6) had previously cited the presence of fatty acids, fats and waxes in soils. With this in mind, several composite soil examples which exhibited the water-repellent property were checked for the presence of fatty acids. This was done by heating the soil in the presence of a strong sodium hydroxide solution, neutralizing with sulphuric acid and then steam distilling in the presence of a slight excess of acid. A small amount of material was obtained which gave a test for a carboxylic acid group (4).

A dilute ether solution of the material obtained from the above steam distillation, when added to subsoil, which wet very easily, had no effect on its wettability. However, when a dilute aqueous solution of calcium or magnesium hydroxide was added to the soil which had been previously treated with the ether extract, the soil, when dry, became very water-repellent.

This was further checked by treating an easily wetted soil with a dilute solution of stearic acid in ether. The ether was evaporated, then a dilute solution of ether calcium or magnesium hydroxide was added and the soil dried. Following this treatment the soil became extremely water repellent. Evidently the formation under field conditions of metallic soaps results in water-repellent soil and a similar water-repellency can be produced in the laboratory by similar chemical combinations.

Jacobson and Holmes (1) found that metalic soaps, such as magnesium stearate, are practically insoluble in ether, but that magnesium stearate is relatively soluble in methyl alcohol. Jamison's work (3) indicated that a water-repellent soil, extracted with ether remained water-repellent. With these facts in mind a sample of water-repellent soil was extracted first with ether to remove any free fats and waxes, then with methyl alcohol. This treatment left the soil readily wettable. The methyl alcohol extract, when evaporated on an easily-wetted soil, left the soil water-repellent whereas the ether extract had no effect. When a portion of the methyl alcohol extract was evaporated to dryness, nitric and perchloric acids added for destruction of organic matter, and heat applied, small globules of fat were released. Further heat oxidized the fat, and the residue, when taken up in distilled water gave strong magnesium and calcium tests. This indicates that calcium and magnesium soaps had been dissolved by the methyl alcohol. It is probable that the formation of a coating of water repellent metallic soap on the soil particles causes the water repellent property found in many Florida soils.

The possible formation of extremely insoluble metallic soaps by zinc, copper and manganese also presents a problem aside from their possible action as water repellent materials. Both copper and zinc are required in citrus nutrition and their behavior, especially that of zinc, when placed on the soil as fertilizers, might be explained by the fact that insoluble soaps are formed. The effects of such compounds on citrus nutrition may be considerable and should be further investigated.

However, the phenomena of water repellency found in sandy soils used for citrus cannot be construed as being entirely detrimental as far as water relations and nutrition are concerned. Since most of the soils

of Florida are very sandy and porous in nature and are subjected to high rainfall, leaching of many nutrient elements is quite rapid. By having some degree of water repellency such a property can be considered as an asset, since it helps prevent rapid leaching of essential nutrients. In cases where water repellent soil has developed to an extreme degree, wettability can be helped by hoeing or mixing the soil and by adding large amounts of finely divided materials as has been previously noted (3) (7).

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Table 1.
Effect of Fertilizer Treatment on Amount of Water-Repellent Soil

Plot No.	Fertilizer Treatment	July 1947 Percent Water Repellent Soil	August 1948 Percent Water Repellent Soil	August 1949 Percent Water Repellent Soil
1 & 12	N - P205 - K20 - Mg0 - Mn0 - Cu0 3-6-8-4-1-½—60 lbs./tree/year 40% N organic source pH controlled to 5.8 with high Ca limestone	23	18	4
2 & 11	3-6-8-0-1-½—60 lbs./tree/year 100% N inorganic source pH controlled to 5.8 with high Ca limestone	4	1	2
3 & 10	3-6-8-2-1-½—60 lbs./tree/year 100% N inorganic source pH controlled to 5.8 with high Ca limestone	29	30	12
4 & 9	3-6-8-4-1-½—60 lbs./tree/year 100% N inorganic source pH controlled to 5.8 with high Ca limestone	23	23	8
5 & 8	3-6-8-4-1-½—60 lbs./tree/year 100% N inorganic source pH not controlled (4.2)	0	1	1
6 & 7	3-6-8-0-0-0—60 lbs./tree/year 100% N inorganic source pH not controlled (4.2)	5	8	3

ADMINISTRATIVE and SHIPPERS ADVISORY COMMITTEE NAMED

The U. S. Department of Agriculture named members and alternates of the Growers Administrative and Shippers Advisory Committees to serve under the amended Federal marketing agreement and order program for Florida oranges, grapefruit and tangerines, during the year ending July 31, 1951. The Growers Administrative Committee, members and alternates, include the following:

District 1: Richard M. Clewis, Jr., Tampa, member; A. V. Saurman, Clearwater, alternate.

District 2: Russell H. McKinney, Eustis, member, John C. Deaver, Umatilla, alternate.

District 3: Grant H. Morthland, Weirsdale, member; Harry C. Dozier, Jr., Ocala, alternate.

District 4: Charles F. Fawsett, Jr., Orlando, member; W. I. Barber, Kissimmee, alternate.

District 5: Paul R. Robertson, Vero Beach, member; Cornelius van der Lugt, Ft. Pierce, alternate.

District 6: J. Paul Garber, Avon Park, member; E. G. Todd, Avon Park, alternate.

District 7: John L. Olson, Dundee, member; Arthur M. Bissett, Winter Haven, alternate. George W. Riddle, Lakeland, member; Alfred M. Tilden, Winter Haven, alternate.

The Shippers Advisory Committee, members and alternates, include the following:

Fred S. Johnston, Tampa, member; John B. Rust, Winter Haven, alternate; John T. Lesley, Haines City, member; Robert K. Cooper, Florence Villa, alternate; R. V. Phillips, Waverly, member; Fred W. Davis, Lake Wales, alternate; Jules W. Bragin, Clearwater, member; John Schirard, Jr., Sanford, alternate; John R. Bynum, Titusville, member; Frank E. Sullivan, alternate; W. A. Knowles, Leesburg, member; W. Fred Herlong, Leesburg, alternate; W. L. Storey, Winter Garden, member; Harold A. Ward, Jr., Oviedo, alternate; J. V. Crum, Weirsdale, member; F. F. Ehlers, Weirsdale, alternate.

The Shippers Advisory Committee makes appropriate recommendations, when it is deemed advisable, to limit the shipment of certain grades and sizes of oranges, grapefruit, and tangerines, and passes them on to the Growers Administrative Committee. The recommendation of the Shippers Advisory Committee, together with its own recommendation for limiting shipments, is transmitted by the Growers Administrative Committee to the Secretary of Agriculture. The Growers Administrative Committee also serves as the official administrative body under the marketing agreement and order program.

Cost of production studies have just been completed on Persian limes and avocados by Dade County Assistant Agent John D. Campbell, and information sent to all Florida growers.

Committee Emphasizes New Uses For Refrigeration

Coordination of research on the use of low temperatures to preserve the quality of farm products was emphasized at the recent meeting of the Cold Storage Advisory Committee, the U. S. Department of Agriculture reported recently. The Committee, established under the Research and Marketing Act of 1946, held its third annual meeting in Chicago in conjunction with meetings of the Refrigeration Research Foundation.

Dr. Barnard Joy, executive secretary of the Committee, represented the USDA Research Administrator in reporting activities under the RMA since administration of the Act was transferred to the administrator's office last August.

A review of RMA projects now under way showed that 18 were of direct interest to the Cold Storage Committee and that 64 additional projects had aspects of interest to the Committee. Only the more important of these were discussed.

The Committee expressed general satisfaction with the results to date on preparation of precooked frozen foods, behavior of oranges in terminal storage, preparation and preservation of frozen milk and cream, effect of storage temperatures on the cooking quality of potatoes, methods of cooling fresh fruits and vegetables before shipment to market, the place of frozen food locker plants in the processing and distribution of meats, and determination of most feasible methods of collecting and disseminating market information on frozen foods.

In its recommendations for new research, the Committee gave top priority to a recommendation made at previous meetings: That a national low-temperature laboratory be established and staffed with outstanding scientists who would work on the basic principles of thermodynamics, heat transfer, and effects of ice formation on foods. Three other recommendations for research on problems that are related to a wide variety of commodities were: Distribution and movement of air in refrigerated warehouse rooms and its relation to engineering and operating problems; efficiency and cost of various packaging materials and methods used in locker plants for storage of frozen foods; and effect of air velocity on quality of various refrigerated commodities.

High priority was given to the need for determining the temperature and other conditions required for improved storage of lemons at terminal markets. Similar work recently completed on oranges has indicated the possibility of expanding consumption of fresh oranges by lengthening the marketing season for them. Other individual-commodity problems on which research was recommended include: Prevention of loss of quality in shell eggs in storage and marketing due to present methods of washing eggs; possibility of expanding the market for milk and reducing its cost to consumers by the development of frozen milk concentrate; and the effect of processing methods on the appearance and quality of frozen poultry, particularly frozen turkeys.

The Cold Storage Committee urged appropriate commodity advisory committees to give consideration to these and several other commodity problems in making their recommendations and indicated its willingness to receive recommendations from commodity committees relating to use of low temperatures in the preservation of agricultural products.

The Committee also recommended research on temperature and other conditions required for the improved storage of shell eggs, seeds, alfalfa meal and other feeds, canned fruits and fruit juices, dried eggs, dried and evaporated milk, and floricultural products.

Paul B. Christensen, vice president of the Merchants Refrigerating Company, New York, served as chairman of the Committee. Other members in attendance were V. O. Appel, president, Fulton Market Cold Storage Company, Chicago; A. R. Current, City Ice & Fuel Company, Chicago; H. C. Diehl, director, Refrigeration Research Foundation, Berkeley, Calif.; A. J. Hampson, treasurer, Merchants Cold Storage and Warehouse Company, Providence, R. I.; J. C. Irwin, vice president, United States Cold Storage Company, Kansas City, Mo.; C. A. Martin, president, Polar Cold Storage, Inc., Nashville, Tenn.; H. J. Nissen, Terminal Refrigerating Company, Los Angeles, Calif.; S. C. Rogers, G. H. Hammond Company, Chicago; and H. W. Wilson, president, Quaker City Cold Storage Company, Philadelphia, Pa. Committee member Walter F. Henningsen, president of the Northwestern Ice & Cold Storage Company, Portland, Ore., was unable to attend because of illness.

Others meeting with the Committee and contributing to the program were H. J. Reed, dean and director of the School of Agriculture at Purdue, representing the Agricultural Research Policy Committee; W. T. Pentzer and Paul L. Harding of the Bureau of Plant Industry, Soils, and Agricultural Engineering; H. W. von Loesecke of the Bureau of Agricultural and Industrial Chemistry; J. W. McKinsey, University of Missouri; and S. T. Warrington, secretary, National Frozen Food Locker Association.

Consumer Practices In Buying Fruits And Juices

Household consumer purchases of frozen concentrated orange juice, which a year ago accounted for only 5 percent of the total orange and orange product purchases for home consumption, now account for 19 percent of total purchases, the U. S. Department of Agriculture said recently.

This trend is reported as a result of studies of household consumer buying practices in the purchase of several fruits and juices, made by the Fruit and Vegetable Branch of the Production and Marketing Administration and the

Bureau of Agricultural Economics, in cooperation with fruit industry groups which bore half the cost of data collection. The studies are based on data obtained by the Industrial Surveys Company, Inc., under contract with the Department, as authorized by the Research and Marketing Act. Purpose of the studies is to supply producers and shippers with data on which to base their marketing decisions.

Products covered in the studies are fresh oranges, grapefruit, lemons, tangerines, and limes; canned single-strength citrus juices; canned tomato, prune, pineapple, grape, apple, and combination vegetable juices; frozen concentrated juices; and the following dried fruits: raisins, prunes, figs, dates, apricots, apples, peaches, pears, and mixed dried fruits.

Accompanying the increase in purchases of frozen concentrated orange juice is a reduction in the relative volume of household purchases of fresh oranges and canned single-strength orange juice. Fresh orange purchases accounted for 62 percent of all orange and orange product purchases (fresh orange basis) in the first quarter of 1949, but in the first quarter of 1950 this had declined to 56 percent. Similarly, purchases of canned orange juice, which in the first quarter of 1949 represented 32 percent of total orange purchases, declined in the first quarter of 1950 to 25 percent.

One of the two reports on the studies, "Consumer Buying Practices for Selected Fresh Fruits, Canned and Frozen Juices, and Dried Fruits, Related to Family Characteristics, Region, and City Sizes," shows purchases in relation to the size and income of the buying families, the region where they live, their urban or rural character, and other factors.

The second report, "Regional Distribution and Types of Stores Where Consumers Buy Selected Fresh Fruits, Canned and Frozen Juices, and Dried Fruits," indicates the volume of purchases by regions and by types of stores (national chains, regional chains, and independent grocery stores), and the changes that occur in volume of purchases and prices from quarter to quarter. It contains numerous charts showing trends in purchases, prices, and other factors.

The two publications supplement regular monthly Department reports that show (1) total purchases by household consumers of selected fresh citrus fruits, frozen concentrated juices, certain canned fruit juices, and dried fruits, (2) the percentage of families buying each product, and (3) average prices paid by consumers.

NEW LINDANE GARDEN DUST

Here's news of another weapon in garden pest control. Control of mole crickets, chinch bugs, aphids, thrips and many other garden, vegetable and fruit tree insects can be effectively obtained by the use of a new garden insect dust containing isotox-lindane. This new dust works three ways in its killing action against insects—contact, stomach poisoning and vapor action.

Isotox-lindane is designed for easy application in metal dusters and can be used on roses and other flowering plants, most vegetables, certain fruits and greenhouse and nursery plants. It is claimed to kill many other pests including armyworms, ants, lacebugs, certain caterpillars and beetles, chiggers, etc.

Dusting with isotox-lindane garden dust is recommended for the early morning or late evening when the temperature is low, the air is still, and rapidly moving pests, such as leafhoppers, are relatively inactive.

World Food Situation Best Since The War

The U. S. Department of Agriculture says the world food situation generallly continued to improve in 1949 and at the beginning of 1950 food consumption in most deficit areas was at the highest level since the war, according to the 1950 **World Food Situation**, prepared by the Office of Foreign Agricultural Relations. However, in many countries, particularly in the Far East, consumption levels still were below prewar.

The 76-page **World Food Situation** is one of a series of world food summaries issued annually by OFAR since 1945. It summarizes the world food supply, reviews production and trade of the most important commodities, and reports the winter crop outlook in the northern hemisphere.

Food production in the 1949-50 consumption year is expected to be only slightly below 1948-49 with moderate declines in cereals, rice, potatoes and sugar, largely being offset by increases in fats, dairy products, meats and fruits. In terms of calories, the net decline amounts only to about 1 percent. It is more than offset by carryovers from the large 1948-49 crops which have permitted continued improvement in consumption, and further improvement seems in prospect for 1950.

During the past two years, world food production has been 2 to 3 percent above prewar but, since world population is over 10 percent above prewar, world output per capita is still below prewar years. This is being only partially offset by more careful utilization of supplies.

Improved food supplies in 1949 made it possible for most European countries to remove or modify their food rationing programs. The average diet improved with increased consumption of fats, meats and dairy products, but the proportion of these foods in the average diet still is relatively low.

World production generally has recovered to such an extent during the past two years that the main problem now is one of marketing rather than one of food deficiency. This is evidenced by growing surpluses in the so-called "hard currency" areas while consumption needs in deficit areas still are not satisfied.

Produce Vitamin B-12 From Citrus Molasses

The mold which produces vitamin B-12, recently found to be a cure for pernicious anemia, can be grown on Florida citrus molasses, according to Dr. James B. Redd, director of the Florida Southern College citrus department.

Experiments with the mold were described briefly by Dr. Redd on the weekly Florida Citrus Mutual radio program scheduled for broadcast July 29 and 30 by nine stations in the state.

"Our work is still in the primary stage," Dr. Redd declared, "but we have had good results in growing the mold on citrus molasses.

"We believe this will develop into a new use for the product, and that it will in time cause citrus molasses to be worth much more than its present price of $10 to $12 a ton as cattle feed."

On the radio program Dr. Redd also described research done on the campus with vitamin P, which has been found to give protection against capillary injury resulting from high blood pressure and atomic radiation.

Growers And Shippers League Makes Report

The latest report of the Secretary of the Growers & Shipper League of Florida contains many interesting features, among them the following of great interest to Florida citrus shippers:—Editor.

GORDON STEDMAN

SECRETARY-MANAGER

Avoidance of Payment of Transportation Tax

In recent weeks there has been a great deal said officially and unofficially with respect to the payment of excise taxes on the transportation of property where the freight bills are either sent or taken to Canada and the freight charges paid in Canada which thereby removed the charges from the transportation tax assessment of 3%.

The Commissioner of Internal Revenue, U. S. Treasury Department, at first ruled that it was the opinion of the Bureau that if a bona fide employee of the actual shipper or other person liable for the transportation charges went to Canada in person and there made payment for the transportation of the property, the tax would not be owing on account of such payment having been made in Canada, even though the shipment originated and moved to destination entirely within the United States.

However, the Commissioner of Internal Revenue has reviewed the entire situation and has now ruled that no matter how the tax law is worded payment of domestic freight bills at a point outside the United States does not excuse shippers or carriers from paying the 3% transportation tax on shipments of property between two points in the United States.

New Fruit Growers Express Cars

Last week while in Washington I had a long conference with Mr. John C. Rill, President of the Fruit Growers Express Company, concerning their new car building program. Mr. Rill has authorized me to make the announcement that the Board of Directors of the Fruit Growers Express Company has authorized the construction of 1,000 new 40 foot steel, end bunker, refrigerator cars, and 100 new 50 foot steel refrigerator cars making a total of 1,100 new cars, construction of which is to begin immediately.

The Fruit Growers Express Company has recognized the need for heavily insulated cars, and all of the 1,100 cars are to be equipped with 6" of insulation and so designed as to make possible the conversion to mechanical refrigeration. This increased fleet of heavily insulated cars should be adequate to handle all of the frozen food traffic out of Florida and the territory served by the Fruit Growers Express and will be providing better equipment for the transportation of fresh citrus fruit and vegetables.

It is expected that a program will be announced in the near future as to the additional refrigerator cars that will be built by the Western Fruit Express Company and the Burlington Refrigerator Express Company, which are affiliated companies to the Fruit Growers Express Company.

In addition to these cars the Fruit Growers Express has ordered a number of mechanically equipped cars for experimental purposes and if it is found practical and economical to equip cars with the mechanical refrigeration the above 1,100 cars can be very easily so equipped for they are to be designed to make possible this conversion.

Reduction in Fresh Citrus Rates

In a conference with Mr. G. B. Rice and officials of the Southern Freight Association we have been advised that the proposed reduction of approximately 14% in rates on fresh citrus fruit has been appealed to the Southern Freight Association Traffic Executive Committee, which committee will not meet until September. This action unfortunately may delay the publication of these lower rates beyond the period when the new crop of fresh citrus fruit begins to move.

CANNING PLANT INSTALLS NEW LINE EXTRACTORS

The Florida Citrus Canners Cooperative at Lake Wales has placed an order with Food Machinery and Chemical Corporation at Lakeland for 84 new in-line extractors to bring their total to 112 machines.

"This decision," M. A. Stephenson, production manager, stated recently, "resulted from very favorable experience during the past season with this extractor both as to yield and quality. These extractors have been used in single strength and concentrate production with equally good results and when the eighty-four machines now on order are installed the Cooperative will be using this type extractor exclusively.

"The installation is in line with the Cooperative's regular policy of producing the highest quality products possible with known and available equipment and methods. The principal brand of the Cooperative is "Donald Duck" and the group was presented the 1949 Food Industries award for outstanding technological achievement in food processing. This was the first award of this kind in the citrus industry."

FMC officials anticipate the same acclaim for the new in-line extractors as was given their now famous original "Super-juicer" rotary machines. In operation, the newer in-line model resembles the older rotary type, having the same intermeshing fingered cups which gently squeeze the juice from the whole fruit.

However, in the new in-line extractor the intermeshing fingered cups are fitted with a completely sealed sanitary juicer and pre-finisher tube which automatically separates the peel, seeds, pulp and rag from the entire juicing operations so that none of the bitter extractions ever come into contact with the delicate fresh natural flavor of the juice.

Food Machinery officials said approximately one million dollars has been spent in tooling up for the present expanded in-line juice extractor manufacturing program which includes production of at least 500 machines for the coming season's concentrate operations.

The Donald Duck concentrators mentioned the constant vigilance maintained by fmc over the performance of the machine, and attribute no breakdowns and steady production with high quality to their ability to supply the current large consumer demands for the Donald Duck frozen citrus concentrates.

The LYONIZER

Department

COMPILED BY THE LYONS FERTILIZER CO.

Reports Of Our Field Men . . .

POLK COUNTY
J. M. (Jim) Sample

While this section has been getting some much needed rains, the lakes do not show any appreciable rise. The summer growth is late and will be delayed until August, especially orange varieties. While fruit is growing, rapid sizing is not evident and much more rain is needed to produce large sizes by picking time. Oil spraying will continue until August due to the late start, and scale infestations are heavy. Cover crop choppers are being used, particularly, the under-the-tree type to eliminate vines and obnoxious weeds. Apparently there will not be a general late bloom in this section due to continued irrigation. However, some new growth with bloom has been observed in scattered areas. It is now getting late in the summer and the coming marketing season is close at hand but very little activity has been shown by the on-the-tree buyers.

SOUTHWEST FLORIDA
Eaves Allison

This territory has received ample rainfall at this writing to run on for a while. This is true from Ruskin to Ft. Myers and from the Gulf island to Arcadia. From a high of eleven inches in twenty four hours at Bradenton, the amount of rain varied downward to a couple of inches plus scattered showers at Arcadia and on south. Citrus crops are in good shape, with good sizes and an early season in prospect especially for those growers who carried on a good irrigation practice during the long dry spell. It looks like we are now able to stop the pumps and haul in the pipe for storage. Vegetable growers are preparing their seed beds for early fall plantings, with most new land areas cleared and ready.

NORTH CENTRAL FLORIDA
V. E. (Val) Bourland

While there are some sections that have not had sufficient rain most of this territory is in good shape, with groves looking good, fruit sizing up well and cover crops making an excellent growth. We are getting quite a bit of late bloom at this time, but just what kind of fruit it will develop into is very hard to tell. We have certainly had a time with insects and there is considerable spraying being done at this time to control scale, rust mite and spiders. While fruit is sizing up well and it now appears that early varieties of fruit might pass the test early, we still do not have very much activity shown by on the tree buyers. However, we have sufficient fruit for all buyers and they will get their share of real good fruit to move at the proper time. Vegetable growers and melon men did not experience a too successful season this year, but they are making their plans and getting their land prepared for the coming season. We hope that this one will be very successful.

SOUTH POLK, HIGHLANDS & HARDEE COUNTIES
R. L. (Bob) Padgett

The citrus growers have been having considerable trouble trying to control scale and rust mite at the same time. We have the scale pretty well under control, but rust mite have been unusually active this summer. The oil spray has been later this summer due to the prolonged dry weather of the early summer months. This has given rust mite more time to work. Cover crops are doing fine and some growers have given these crops a little boost by making a light application of quick acting nitrogen. A good healthy cover crop is a sure sign of good soil condition for the present, and insurance to keep it that way. Many vegetable growers are now clearing and conditioning the soil for fall crops. It is a good idea to be a little early than too late, for soil conditioning takes some little time to do its best work.

WEST CENTRAL FLORIDA
E. A. (Mac) McCartney

Everything is growing and looking good. This is as it should be for we have had ample rain in past weeks to take care of all requirements. Fruit is sizing up in good shape, and by the way, there seems to be plenty of it, with very few exceptions. All grove owners are feeling good now that they have completed their oil spraying and have the groves laid by for the summer months. There continues a great deal of activity by rust mite and we are all busy getting this pest under control. As stated we have a good crop of fruit and now we are doing all possible to make real quality fruit to be placed on the market during the coming season. It now appears that we are going to have some fruit that will get on the market early and there is the general feeling of optimism that comes when prospects for a good season are in sight. Have just returned from Texas where we saw some beautiful country that is all together different from our beauty, but our greatest delight came when we entered Florida on our return trip.

PINELLAS & HILLSBOROUGH COUNTIES
T. D. Watson

This is my first column for the Lyonizer, but I want to assure you that we will make every effort to give you a true picture of conditions in this territory as we go along from month to month. Since the rainy season started there has been quite a change in the citrus picture with trees looking better and the fruit crop growing in good shape. Most of the growers are well up with their spray program except in a few cases where rain had hampered spray operations. There is, generally speaking, an excellent cover crop throughout the Pinellas county grove area which is very desirable, and of course, this is due to the ample amount of moisture that we now have available. The bad leaf droppage that was present a few weeks ago has subsided now due to red spider control. Generally speaking, there is a good crop of oranges but not as heavy as last year and the same applies to the grapefruit crop. Practically everyone has finished their summer application of fertilizer.

ADVERTISEMENT — LYONS FERTILIZER COMPANY

We're now gittin' ready for another marketin' season and growers has done everything possible to raise one of Florida's best quality crops to offer the market. Groves has been properly fertilized and sprayed, and other minor details has been taken care of to make both a quality and a quantity crop. Now it's up to the folks who handle the marketin' to keep up the good work. We're certain they'll handle the situation in first class shape. Fruit will be excellent for the fresh fruit market and the men connected with the cannin' industry that we've talked to say that both single strength juice and concentrate will be about cleared away when we start movin' the new crop. There's no reason why we shouldn't expect good prices all durin' the comin' season.

The tabulation of bids for the new Florida Citrus Mutual building in Lakeland showed that Ewell Construction Co., of Lakeland, was low bidder for the job, with an estimated completion date of five months from date of contract. Mutual's officers made an agreement with the City of Lakeland for the lease of the building when it's finished for a twenty-year period based on an annual rental. At the end of this time Mutual has the option to buy the buildin' at actual original cost, with all rentals paid durin' the twenty-year period to apply on the purchase price. Mutual will share the new quarters with three other important agencies, the Growers Administrative Committee, the Federal State Market News Service and the Marketin' Administration of the U. S. D. A.

Vegetable growers all over the state are preparin' their fall plantin's. New land has been placed in tip-top shape and old land properly cared for. Seed beds are now under way. Florida's vegetable growers has overcome a lot of hazards and will continue to supply the Nation with plenty of fresh vegetables durin' the winter months. Florida's large variety of fresh vegetables take care of virtually all the fresh vegetable needs of this country's housewives.

Cattlemen in Florida continue to make progress in developin' fine pastures. This practice is raisin' finer beef and increasin' cattlemen's profits. We can think of no other industry that has been more progressive durin' the past few years. It's common practice nowadays to fertilize and care for pastures, and it has proven a most profitable feature.

Flowers of various kinds are takin' an important position in Florida and the growers is doin' a swell job of producin' and marketin' their crops. There's lots of land in Florida particularly suited for raisin' flowers and they's lots of opportunity in this business.

Uncle Bill

Citrus Advisory Committee Reviews Research Program

Although research on the marketing and utilization problems of the citrus industry should have priority under the Research and Marketing Act, there is an urgent need for more intensified production research to control such insects as the citrus blackfly, Mexican fruitfly, and the Oriental fruitfly, according to the Citrus Fruit Advisory Committee meeting with U. S. Department of Agriculture officials.

It was pointed out that the citrus blackfly has been found right across the border from Texas and that failure to check its advance into Texas might easily spell ruin to the citrus and other fruit industries in this country.

After hearing progress reports on citrus research and service work, the committee expressed general approval of the current program and urged that the issuance of reports on a number of projects be expedited as much as possible.

Dr. P. V. Cardon, research administrator for the U. S. Department of Agriculture, brought the citrus advisory group up to date regarding over-all administration of the RMA and its integration with other research and service work of the Department. Dr. Cardon assured committee members that their constructive advice is appreciated and that every possible consideration will be given to their recommendations. He pointed out that it was agreed at the recent meeting of the over-all Agricultural Research Policy Committee that the commodity advisory committee system would be continued in its present pattern and strengthened.

Assistant Secretary Knox T. Hutchinson met briefly with the Committee and expressed appreciation for the valuable contribution they are making in bringing the Department first-hand information about the problems of the citrus industry. He said this was particularly important in the case of citrus fruit because of its importance in upgrading the American diet.

Included among marketing and distribution work which the committee believes should be continued or expanded are: The application of modern and more efficient methods of handling farm commodities as a means of reducing costs; developing new standards for grades of frozen concentrates of grapefruit; tangerines, and blends; increase wholesale market news coverage of truck shipments from producing areas as well as arrivals on more of the important terminal markets; continue the retail market news experiment in Baltimore for at least another year; in connection with regional marketing research on citrus, information already obtained on costs of processing frozen citrus concentrates should be analyzed and published as soon as possible; on-the-spot collection of information on foreign markets for citrus should be continued; any expansion of cost and margin work on citrus should include additional representative cities rather than additional studies in cities already covered; collection of data on consumer purchases of fresh citrus, canned and frozen juices, and dried fruits would be desirable as a continuous service to the industry; further research to prevent decay and spoilage of citrus is most urgently needed; expansion was strongly recommended for work on improved methods of sterilizing citrus fruit for market against the Mexican fruitfly, citrus blackfly and other insects; current work to improve rail and truck equipment and methods of transporting farm products to market should be continued as well as the collection of complete information on operating costs of truck and rail equipment with a view to reducing transportation costs.

In the field of utilization research, the committee reaffirmed its earlier recommnedations that work to improve citrus products, and find new and improved uses for them should be expedited as much as possible.

As indicated above, the citrus advisory group is extremely concerned about the need for additional means of preventing or controlling insects that are a constant threat to citrus and other fruit production in this country and gave it top priority under production. Other recommendations concerning production research include: Continuation and expansion of citrus rootstock studies to determine resistance to footrot, gummosis, and other diseases as well as to salinity and nematodes and the effect on production and quality; continuation and expansion of studies of nematodes as limiting factors in citrus production; initiation of research to determine the effect of soil nutrient balance on internal and external qualities of the fruit; and expansion of breeding work to produce new and improved varieties for processing and fresh use.

NEW CO-OP OPENING LIME JUICING PLANT

Organized only a year ago, the Florida Tropical Fruit Growers Association, Goulds, is establishing a plant in South Dade for juicing limes and processing avocados. The plant will operate in conjunction with the University of Miami, will use facilities on the campus, and work closely with the college research laboratories. The plant will offer a chance to profitably market the lower grade limes produced by the 72 active members of the co-op. Besides manufacturing limeade, the plant is set up to produce frozen fruit concentrates.

Various studies by the National Safety Council reveal that falls are the leading type of farm work accidents.

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